

CITY OF SAN BRUNO
CORPORATION YARD WELL 17 PUMP STATION
SECTION 1000
TECHNICAL PROVISIONS

TP 1.01 PROJECT SCOPE The Contractor shall provide all labor, materials, and appurtenances for this project as described in this specification. All equipment shall operate satisfactorily at the end of the project. All work shall be performed in a manner that conforms to applicable codes, including the National Electrical Code and any local building codes in force, as well as other accepted practices. The Contractor will furnish, install, and commission the system described in specification sections 16000, 17000 and 17600.

TP 1.02 EXISTING CONDITIONS The City of San Bruno operates a domestic well and water pumping station, hereafter referred to as Well 17 (Corporation Yard). This pump station is equipped with a submersed 125 horsepower well pump, which is presently under manual control. The reduced voltage autotransformer starter and other interlocks are located in an indoor motor control center. An existing PLC system to be modified under this contract is located on the opposite wall. A series of pneumatic time delay relays and machine tool relays located in the relay compartments or starter compartment provides interlocking and control functions. Other interlocks, including low-suction or high-pressure cutouts, may exist. A flow meter exists and is connected to an interlock circuit. A chlorine monitor and mechanical scale are located in an adjacent chemical feed room.

The City of San Bruno operates a SCADA system with existing equipment at this site. This project includes integration with the existing SCADA system. Contractor's responsibilities are delineated in sections 17000 and 17600.

TP 1.03 EXAMINATION OF EXISTING SITE Although it is not a requirement, the contractor shall be responsible for visiting the existing site and verifying the site conditions and dimensions prior to bidding the work. At that time, any questions regarding the technical requirements may be raised. The City will provide a walk-through on Friday, February 14, 2003, at 9:00 AM. Prospective bidders shall contact Eric Daniel at (650) 637-2232 to make arrangements to attend the walk through.

TP 2.00 EXECUTION

TP 2.01 EQUIPMENT SELECTION The contractor shall provide, install, and test all the equipment furnished as listed in sections 17000 and 17600.

TP 2.02 INSTALLATION All work shall be performed in a manner that conforms to applicable codes, including the National Electrical Code and any local building codes in force, as well as other accepted practices. The work shall be completed under the direction of the City's consulting engineer. In the event of an inconsistency or ambiguity in the specification, the contractor shall request an RFC in writing.

TP 2.03 MCC RECONFIGURATION In the event that the contractor needs to perform any reconfiguration of the Motor Control Center, such work shall be performed using materials and components to match the existing components.

1. The existing motor control circuits, interlocks, relays.
2. The existing pilot devices
3. The existing circuit breakers located in the distribution panel.
4. Any available existing loose drawings or those provided on the MCC doors shall be marked up to indicate any changes made.
5. Any additional wiring shall be marked with permanent wire markers. To avoid confusion, the contractor shall not duplicate any wire numbers used in the existing equipment.
6. If possible, all modifications shall be performed in a manner that would have the same appearance and functionality of an original installation.

TP 2.04 FUNCTIONAL REQUIREMENTS All functions provided for in the existing design shall be preserved including spare contacts and external connections. In addition to any

requirements listed in sections 17000 and 17600, Contractor shall make adjustments as necessary to ensure the proper operation of the motors and starters as well as the operation of external limit switches, valves, and the SCADA and control systems. Note that specific communications provisions may require additional devices not specifically indicated in the specification.

TP 2.05 MOTOR WIRING Not applicable.

TP 2.06 DELIVERY, STORAGE, AND HANDLING Equipment shall be handled and stored in accordance with manufacturer's instructions. Contractor shall be responsible for the equipment until accepted by the City.

TP 2.07 INSTALLATION SCHEDULE In order for the city to maintain the functionality of the pump station, work shall be staged and performed so that the well pump is running at all times. Contractor shall be limited to three (3) shutdowns of up to 6 hours in duration, which must be scheduled in advance by calling the SBWD Field Supervisor. Contractor shall not start or stop any pump or process equipment without advance permission from the water operations staff. Installation shall be completed within 50 working days after receipt of Notice To Proceed.

TP 2.08 COORDINATION OF WORK The contractor shall coordinate all activities with the City and it's consulting engineer, The EDCCO Group.

TP 2.09 FINAL DOCUMENTATION Contractor shall provide a detailed bill of materials and "as built" drawings showing internal drawings for each unit, the external wiring to field devices, and any interconnections as described in sections 17000 and 17600. Contractor shall provide (2) loose sets of drawings to the city as well as (2) bound operation and maintenance manuals including all catalog data, installation, operation and maintenance data, bills of materials, drawings, and vendor lists. The City shall retain the right to review and approve said documentation and request reasonable changes and/or clarifications.

TP 2.10 CERTIFICATE OF INSTALLATION Contractor shall provide a certificate of installation, attesting that the work has been completed and that the equipment has been installed, configured, and tested per manufacturer's recommendations. For convenience, test forms have been included in Section 17000, which may be used for this

project. Contractor may provide their own test forms, subject to approval by the consulting engineer, as part of the submittal.

TP 2.11 SPARE PARTS Spare parts shall be provided as called out in sections 17000 and 17600.

TP 2.12 WARRANTY Equipment and installation shall be guaranteed for the period of 1 (one) year.

TP 2.13 SUBMITTAL OF BIDS The bid schedule is for the complete package contained in the Technical Provisions. Contractor shall submit catalog information and an installation plan with their bid. The City retains the right to reject any bids that do not clearly meet the criteria of this specification. Bids are to be presented to the City of San Bruno, 567 El Camino Real, San Bruno, California, 94066. Bids must be received by 2:00 PM on February 21, 2003 to be considered.

CITY OF SAN BRUNO
WELL 17 SCADA UPGRADE
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